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[TITLE OF THE INVENTION] Mobile Phone Terminal

[ABSTRACT]

[PROBLEM TO BE SOLVED] To obtain a mobile phone terminal which identifies a position information and the time information and functions according to the setting

[SOLUTION] A mobile phone terminal, comprising: a communication operation mode setting unit 1; a communication unit 2, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit 3, which outputs each information of date, week, and time; a telephone directory setting unit 4 that can input and designate the position information or the time information, a memory mode setting unit 5, setting a position information and a time information; a display unit 6 displaying an information; and a terminal control unit 7, which retrieves, extracts, and controls the input information based on the position information and the time information.

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[CLAIMS]

1. A mobile phone terminal, comprising:
 - a communication operation mode setting unit;
 - a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode;
 - a clock unit, which outputs each information of date, week, and time;
 - a memory mode setting unit, setting a position information and a time information;
 - a display unit displaying an information;
 - a notification unit notifying the information; and
 - a terminal control unit, which retrieves, extracts, and controls the input information of every storage mode based on the position information and the time information.
2. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a telephone directory setting unit as the storage mode setting unit.
3. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a redialing setting unit as the storage mode setting unit.
4. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a call notification mode selection setting unit as the storage mode setting unit
5. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a ringback tone selection setting unit as the storage mode setting unit
6. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a ringing volume setting unit as the storage mode setting unit
7. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a reception volume setting unit as the storage mode setting unit
8. The mobile phone terminal of claim 1, characterized in that the mobile phone

terminal comprises a telephone answering system setting unit as the storage mode setting unit

9. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a scheduler setting unit as the storage mode setting unit

10. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a caller name notification information setting unit as the storage mode setting unit.

11. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a data communication mode setting unit as the storage mode setting unit

12. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a timetable setting unit as the storage mode setting unit.

13. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a transportation schedule setting unit as the storage mode setting unit

14. The mobile phone terminal of claim 1, characterized in that the mobile phone terminal comprises a key lock setting unit as the storage mode setting unit

[DETAILED DESCRIPTION OF THE INVENTION]

[TECHNICAL FIELD]

[0001] This invention relates to mobile phone terminals having position information identification function and time information identification function. In order to use the pre-input storage information of the mobile phone terminals conveniently, this invention concerns about the technology of retrieval and extraction in accordance with the set position information and time information, and of controlling mobile phone terminals.

[BACKGROUND ART]

[0002] Mobile phone terminals have a telephone directory function, a redialing function, a call notification mode selection function, a ringback tone selection function, a ringing volume selection function, a reception volume selection function, a telephone answering system function, a scheduler function, an caller name notification function, a data communication mode selection function, a timetable storage function, a transportation schedule storage function, a key lock setting function or the like, which have become more convenient tools for a user.

[0003] The telephone directory is a function which is capable of storing telephone numbers and names. It may also be grouped, e.g. a business group or a private group.

[0004] The redialing function is a function which stores the telephone number that a phone user called, and its storage content may include telephone numbers as well as the receivers' names and called date and time, making it possible to store several numbers that are called in the past. Similarly, there is also a call back function, which has a function of storing call register of the phone numbers received, which is considered same as the redialing function.

[0005] The call notification mode selection function is a function which can select the notification method when the call is received either by ringback tone or vibration of a vibrator. The user can select the mode depending on time frame and place, such as using the ringtone during daytime, the vibrator at night, the ringtone at office, or the vibrator at library, etc.

[0006] The ringback tone selection function is a function that can select ringing tone for notification when the call is received. The ringtones include ringer notification and melody notification, in which some of the ringer notification have a function that can select ringtone from a plurality of ring patterns, or a function that one can select from pre-registered, fixed type of melodies, or from a plurality of melodies that a mobile

phone terminal user can arrange in any way creating their original melodies.

[0007] The ringing volume selection function is a switching function, such as the volume of the ringback tone notified when receiving a call can be selected from low, middle, or high volume etc. The ringing volume can be set high if the mobile phone is at a town or at a station, or the ringing volume can be set low when the mobile phone is situated such as in a quiet area inside a room.

[0008] The a reception volume selection function is a switching function, such as talking volume can be selected from low, middle, or high volume etc. The reception volume can be set high if the mobile phone is at a town or at a station, or the reception volume can be set low when the mobile phone is situated such as in a quiet area inside a room.

[0009] The telephone answering system function is used while the user cannot answer the phone when receiving a call, and when sleeping at night, or when the user is needed to be refrained from talking such as in a library and so forth.

[0010] The scheduler function is a function, which memorizes date/time and business memo and gives notification at the specified time. Furthermore, the scheduler function can also be used together with the telephone answering system.

[0011] The caller name notification function is a function that notifies a caller name by using a caller sub-address. If the function is used for business purpose, the sub-address is made as a company name, and if it is used for private purpose, the sub-address can be a person's name.

[0012] The data communication mode selection function is a function that selects one of the following modes: a use mode of the terminal to be used in voice call, or a mode used in data communication. If the data communication is performed outside, generally user will stop in one place and they do not move around. This is to prevent degradation of the wireless condition while communicating. Thus, the user can decide which place is suitable for data communication when they get used to it.

[0013] The timetable storage function is used when storing a Monday-to-Saturday timetable instead of using a notepad. Managing timetables will be complicated when the user has a number of timetables such as for school or for part-time jobs.

[0014] The transportation schedule storage function is used when storing a transportation schedule instead of using a notepad. Managing transportation schedules will be complicated when the user uses a number of transportation means or stops/stations.

[0015] The key lock setting function is a function which does not accept a key

input to prevent malfunction while moving with the mobile phone terminal. For example, since the user does not use the mobile phone terminal while he/she is on commuter trains, he/she can set the key lock setting function so that the malfunction is prevented.

[OBJECT OF THE INVENTION]

[0016] The above described functions have only worked regardless of the situations when used. The situations when used, for example, a personal handyphone system has a public mode and a home mode as communication operation modes. In the public mode, it is assumed to be used outside while moving, such as in a town, at a lobby of the office or the school, at a station platform, and trains and buses stopped or move slowly. In the home mode, a mobile phone terminal is registered as a handset to the cordless telephone base, and used as a handset for the cordless telephone. Thus, in the case of the personal handyphone system, situations will dynamically change depending on the communication operation modes, and among other things, the public mode may usually take various places that the mobile terminal is used.

[0017] Furthermore, used situations may vary depending on time. The mobile terminals are generally used for business from eight o'clock in the morning to eight o'clock in the evening. On the other hand, statistical facts show that the mobile terminals are more used privately after 11 o'clock at night. Furthermore, Standard life patterns of office workers or students are on one-week basis, generally speaking, Monday to Friday are for routines, and Saturdays and Sundays may have rather different way of life patterns.

[0018] Therefore, it is an object of this invention to provide more convenient functions, considering the places/positions of the mobile phone terminals to be used as well as time including weeks. The present invention is made in order to achieve the above described object, which is to provide a controllable mobile phone terminal that can retrieve and extract input information considering of position information and time information.

[0019] An object of the first invention is to provide a mobile phone terminal, in which information intended for use is stored in advance, and upon utilizing this information, the place and time frame to be used are specified in order to adapt it to the mode that fits to the user's life pattern. Said terminal then becomes possible to retrieve, extract and control the corresponding input place and time.

[0020] It is an object of the second invention to provide a mobile phone terminal, which retrieves a group-registered telephone directory data corresponding to the pre-set

place and time, and displays with priority a telephone directory of a certain group.

[0021] It is an object of the second invention to provide a mobile phone terminal, which can group-register data corresponding with the pre-set place and time, and can display with priority a redial data of a certain group when using a redialing function,

[0022] It is an object of the fourth invention to provide a mobile phone terminal, which can select and operate a notification mode that is registered corresponding to a pre-set place and time when using a ringback tone notification mode selection function.

[0023] It is an object of the fifth invention to provide a mobile phone terminal, which can select and operate a ringtone that is registered corresponding to a pre-set place and time when using a ringtone selection function.

[0024] It is an object of the sixth invention to provide a mobile phone terminal, which can select and operate a ringing volume that is registered corresponding to a pre-set place and time when using a ringing volume selection function.

[0025] It is an object of the seventh invention to provide a mobile phone terminal, which can select and operate a reception volume that is registered corresponding to a pre-set place and time when using a reception volume selection function.

[0026] It is an object of the eighth invention to provide a mobile phone terminal, which can select and operate a response message that is registered corresponding to a pre-set place and time when using a telephone answering system function.

[0027] It is an object of the ninth invention to provide a mobile phone terminal, which can retrieve, extract and control a schedule that is registered corresponding to a pre-set place and time when using a scheduler function

[0028] It is an object of the tenth invention to provide a mobile phone terminal, which can select and control a content that is registered corresponding to a pre-set place and time when using a caller name notification function.

[0029] It is an object of the eleventh invention to provide a mobile phone terminal, which can set a data communication mode that is registered corresponding to a pre-set place and time when using a data communication function.

[0030] It is an object of the twelfth invention to provide a mobile phone terminal, which retrieves and displays with priority a timetable corresponding to the pre-set place and time.

[0031] It is an object of the thirteenth invention to provide a mobile phone terminal, which retrieves and displays with priority a transportation schedule corresponding to the pre-set place and time when using a transportation schedule function.

[0032] It is an object of the fourteenth invention to provide a mobile phone terminal, which can operate and select a condition that is registered corresponding to a pre-set place and time when using a key lock function.

[SUMMARY OF THE INVENTION]

[0033] The first invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a memory mode setting unit, setting a position information and a time information; a display unit displaying an information; a notification unit notifying an information; and a terminal control unit, which retrieves, extracts, and controls the input information of every storage mode based on the position information and the time information.

[0034] The second invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a telephone directory setting unit which can input and designate the position information or the time information; a storage unit which stores an input information, a display unit displaying an information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0035] The third invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; redialing setting unit which can input and designate the position information or the time information; a storage unit which stores an input information, a display unit displaying an information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0036] The fourth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each

information of date, week, and time; call notification mode selection setting unit, which can input and designate the position information or the time information, and can select either an incoming ringtone notification or a vibrator notification as the notification mode; a storage unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0037] The fifth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a ringback tone selection setting unit that can input and designate the position information or the time information; a storage unit which stores the input information, a display unit showing the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0038] The sixth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a ringing volume setting unit that can input and designate the position information or the time information, and can select the volume; a storage unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0039] The seventh invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a reception volume setting unit that can input and designate the position information or the time information, and can select the volume; a storage unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0040] The eighth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a telephone answering system setting unit that can input and designate the position information or the time information; a storage unit which stores the input information, a display unit showing the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0041] The ninth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a scheduler setting unit that can input and designate the position information or the time information, and can automatically send emails when used with the telephone directory function and the notepad together, and can designate the response message when worked together with the telephone answering system function; a memory unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0042] The tenth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a caller name notification information setting unit that can input and designate the position information or the time information, and can designate such as a persons name as a private caller name; a memory unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0043] The eleventh invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each

information of date, week, and time; a data communication mode setting unit that can input and designate the position information or the time information, and can select a voice call, a quasi-voice data communication, and other types of high-speed data communications, a memory unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0044] The twelfth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a timetable setting unit that can input and designate the position information or the time information, and can select timetables which may input and which corresponds to the day of the week; a memory unit which stores an input information, a display unit displaying an information; a notification unit notifying the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0045] The thirteenth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a transportation schedule setting unit that can input and designate the position information or the time information; a storage unit which stores the input information, a display unit showing the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[0046] The fourteenth invention of the mobile phone terminal comprises: a communication operation mode setting unit; a communication unit, which can extract a position identification information from a received information that can be received from each of the communication operation mode; a clock unit, which outputs each information of date, week, and time; a key lock setting unit that can input and designate the position information or the time information; a storage unit which stores the input information, a display unit showing the information; and a terminal control unit, which retrieves, extracts, and controls the input information based on the position information and the time information.

[DESCRIPTION OF THE PREFERRED EMBODIMENTS]

[0047] First Embodiment. Fig. 1 is a constitutional diagram for explaining an operation of the first embodiment of the mobile phone terminal. 1 is a communication operation mode setting unit, 2 is a communication unit, 3 is a clock unit, 4 is a telephone directory setting unit, 5 is a storage unit, 6 is a display unit, 7 is a terminal control unit, 8 is a communication unit which communicates with a mobile terminal. The communication unit 8 is a base station of a digital cordless telephone base or the like.

[0048] Figure 2 is an operational flowchart for explaining the first embodiment. Firstly, a schematic flow will be described referring to Fig. 2. To begin with, names and phone numbers are grouped and registered in order to make a telephone directory data. Then, a communication operation mode, a position information, a time frame information, a prioritized telephone directory group to be displayed are set. Then, date, time, week are set as a time information. Then, the communication operation mode is set for example, as a public mode or as a home mode. As for the public mode, the mobile phone will be in standby status if it is in the call service coverage area. At this time, the mobile phone terminal register its position to the base station and obtain a base station number information. This is a prerequisite of using the telephone directory.

[0049] Description will now be made how to use the telephone directory in practice. Firstly, the operation mode is identified, for example as the public mode. Then, by identifying the standby base station information, a varification is made where does it situated in the position information in a prioritized telephone directory display setting. A varification is then made where in the time frame information does it apply in the prioritized telephone directory display setting. By varifying these two aspects, it is determined which group of the telephone directory is to be displayed first, then the determined group is displayed.

[0050] Specific description will now be made by referring to Fig. 1. In Figure 1, the telephone directory data is stored in the storage unit 5. For example, assuming that a group A has names A1, A2, A3, A4, and A5, and a group B has names B1, B2, B3, B4, and B5, and a group C has names C1, C2, C3, C4, and C5, which summed up to 15 registered names. Furthermore, each of these names also has a corresponding telephone number registered. Here, names and telephone numbers related to business relationships are registered in the group A, names and telephone numbers related to private relationships such as friends whom the user may give a call from outside, are registered in the group B, and names and telephone numbers that the user may give a call while he/she is at home, are registered in the group C.

[0051] Then, the telephone directory setting unit 4 is set to be displayed with priority so that it fits the users' life pattern. This telephone directory can be set with regard to the position information and the time information. For example, the telephone directory setting condition is set as shown in Fig. 3, i.e. 'office' is set as a position A in the group A. A time is registered from 8 o'clock to 19 o'clock, which is the users' working hours. Recognition of the 'office' as the position can be made for example, by setting a communication operation mode setting unit 1 to 'public mode' and using both the communication unit 2 of the terminal and the communication unit 8 of the public base station to register the position as well as making it in the standby status, thus the terminal can identify the standby base station number. When a base station which is close to the 'office' is assumed as a standby base station, this base station number is stored in the storage unit 5 as the 'position A'. Access to this storage information allows the 'position A' to be identified as the 'office'. Identification can also be made by the clock unit 3, which identifies 8 to 19 o'clock as a 'time A' as it holds the time information. Therefore, the telephone directory of this mobile phone terminal automatically displays a telephone directory of the group A with priority when it satisfies both position A and time A setting requirement.

[0052] The group B is then set to 'except the position A (office)' as a position B. Furthermore, 0 to 24 o'clock is set as time B. This setting allows the telephone directory of group B to be automatically displayed with priority if the mobile phone terminal is placed other than the office or the communication operation mode is public.

[0053] The group C is then set to 'home' as for the communication operation mode. Thus, when the mobile phone terminal is used as a handset for the cordless telephone, the telephone directory of group B is automatically displayed with priority.

[0054] Furthermore, although a certain telephone directory is displayed with priority according to its setting condition, a predetermined operation can be made to have access to other groups' telephone numbers. Also, if the position and the time does not apply to the set condition, the telephone directory will be displayed based on the selection order set in advance.

[0055] Also, instead of using the telephone directory setting unit as the storage mode setting unit, which is possible to set the position and time information, a redialing setting unit can be used, which sets a redialing function. The redialing function is a function which stores the telephone number that a phone user called, and its storage content may include telephone numbers as well as the receivers' names and called date and time, making it possible to store several numbers that are called in the past. Similarly, there is also a call back function, which has a function of storing call register

of the phone numbers received, which is considered same as the redialing function.

[0056] Also, instead of using the telephone directory setting unit as the storage mode setting unit, a call notification mode selection setting unit, which sets the call notification mode selection function, can be used. The call notification mode selection function is a function which can select the notification method when the call is received either by ringback tone or vibration of a vibrator. Users can select the mode depending on time frame and place, such as using the ringtone during daytime, the vibrator at night, the ringtone at office, or the vibrator at library, etc.

[0057] According to the embodiment, a discriminated telephone directory data can be displayed with priority, which discrimination is based on the position information such as in the office or outside the office. Furthermore, the telephone directory data can be displayed with priority with the designated time frame, so that for example, even if the mobile phone terminal has a huge amount of data to be registered in the telephone directory, the display can automatically be switched to the applicable telephone number group of its life pattern. Thus this embodiment has an effect of realizing a telephone directory which can be used conveniently.

[0058] If the redialing setting unit, which sets the redialing function, is used instead of the telephone setting unit, which is a storage mode setting unit, the user can retrieve/extract business related redialing information during working hours, and the information can be displayed etc.

[0059] Also, if the call notification mode selection setting unit that sets the call notification mode selection function is set instead of using the telephone directory setting unit that is used as the storage mode setting unit, the mobile phone terminal can be provided by a functional setting. The functional setting, for example, is to select the mode depending on time frame and place, such as using the vibrator in a library or a meeting room or at nighttime, or using the ringtone during daytime, etc.

[0060] Second Embodiment. Fig. 4 is a constitutional diagram for explaining an operation of the second embodiment of the mobile phone terminal. In Fig. 4, 1 is a communication operation mode setting unit, 2 is a communication unit, 3 is a clock unit, 8 is a communication unit which communicates with a mobile terminal, 9 is a ringback tone selection setting unit as a storage mode setting unit, 10 is a storage unit, 11 is a notification unit, 12 is a display unit, and 13 is a terminal control unit.

[0061] Figure 5 is an operational flowchart for explaining the second embodiment. Firstly, a schematic flow will be described referring to Fig. 5. To begin with, confirmation will be made on types of ringers and melodies as the ringback tone selection function. If original melodies are needed, new data will be made. Then, a

position information, a time frame information etc. are set as a setting requirement for operating one type of these ringtones. Then, date, time, week are set as a time information. Then, the communication operation mode is set for example, as a public mode or as a home mode. As for the public mode, the mobile phone terminal will be in standby status and obtains the base station and obtain a base station number information. This is a prerequisite of using the second embodiment.

[0062] Description will now be made how to operate the ringback tone in practice. Firstly, the operation mode is identified, for example, identified as the public mode. Then, by identifying the standby base station information, varification is made where does it situated in the position information of the ringtone setting. Then the varification is made by current time information where does it situated in the time frame information in a ringtone setting. By verifying these aspects, it is determined that which one of the ringtones is to be used, and then the determined ringtone is operated.

[0063] Specific description will now be made by referring to Fig. 4. In Figure 4, the ringback tone types and data are stored in the storage unit 5 in advance. For example, assuming that a ringtone A has ringers A1, A2, A3, A4, and A5, and a ringtone B has original melodies B1, B2, B3, B4, and B5, and a ringtone C has fixed melodies C1, C2, C3, C4, and C5, which summed up to 15 registered ringtones. Here, assume that the ringtone A is operated when receiving a call while working, the ringtone B is operated to be recognizable by the user even if he/she receives a call in a crowded place outside or under noise condition, and the ringtone C is operated when receiving a call at home.

[0064] Then, to the ringback tone selection setting unit 9, a setting is made in advance so that it fits to the users' life pattern when operated. This ringtone can be set with regard to the position information and the time information. For example, the setting is made such as shown in the ringtone setting condition of Fig. 6, i.e. 'office' is set as a position A in the ringtone A. Then, the time is registered from 8 o'clock to 19 o'clock, which is the users' working hours. As described above, the 'office' is identified as the position. Also, the clock unit 3 makes it possible to identify 8 to 19 o'clock as 'time A', since it has the time information. Therefore, ringtone of this mobile phone terminal is automatically selected from the designated ringer 1 and ringer 5 and then notified by the notification unit 11 if the communication operation mode is public and satisfies both the position A and the time A.

[0065] The ringback tone B is then set to 'except the position A (office)' as a position B. Furthermore, 0 to 24 o'clock is set as time B. This setting makes it possible

to set the designated original melody within the original melody 5 from the original melody 1 of the ringtone B if the mobile phone terminal is placed other than the office or the communication operation mode is public, and it make possible to notify the automatically selected ringtone by the notification unit 11,

[0066] The ringback tone C is then set to 'home' as for the communication operation mode. Thus, when the mobile phone terminal is used as a handset for the digital cordless telephone, a ringback tone is automatically selected from the fixed melody 1 or from the fixed melody 5, and is possible to be notified by the notification unit 11.

[0067] Also, when the position and time do not fit to the set condition, pre-set ringback tone is set.

[0068] Then, instead of using the ringback tone selection setting unit as a storage mode setting unit, which can set the position information and time information, a ringing volume selection setting unit can be used, which set the ringing volume selection function. The ringing volume selection function can have a switching function which can be selected from low, middle, or high ringback tone volume etc. The ringing volume can be set high if the mobile phone is at a town or a station, or the ringing volume can be set low when the mobile phone is situated such as in a quiet area inside a room.

[0069] Also, instead of using the ringback tone selection setting unit as a storage mode setting unit, a reception volume selection setting unit can be used, which set the reception volume selection function. The reception volume selection function can have a switching function which can be selected from low, middle, or high volume etc. The reception volume can be set high if the mobile phone is at a town or a station, or the reception volume can be set low when the mobile phone is situated such as in a quiet area inside a room.

[0070] According to the embodiment, distinguished ringback tone settings can be done based on the position information such as in the office or outside the office. Furthermore, since it is possible to display the ringback tone of the designated timezone, for example, the user can certainly recognize the ringtone of his own, i.e. by using the original melody, when he is in a crowded place, or he can lower the noise by setting more silent ringtone at night. Thus this embodiment has an effect of realizing ringtones which can be conveniently used.

[0071] Then, if the ringing volume selection setting unit, which set the ringing volume selection function, is used instead of using the ringback tone selection setting unit that is used as a storage mode setting unit, a functional setting can be done

depending on position information and time information set to the ringing volume selection function. The functional setting, for example, is to change the ringing volume larger when the user is in crowded surroundings such as stations, or to change the ringing volume lower if the user is in a quiet place or if it is at nighttime.

[0072] Also, if the reception volume selection setting unit, which set the reception volume selection function, is used instead of using the ringback tone selection setting unit that is used as a storage mode setting unit, a functional setting can be done depending on position information and time information set to the reception volume selection function. The functional setting, for example, is to change the reception volume larger when the user is in crowded surroundings such as stations, or to change the reception volume lower if the user is in a quiet place.

[0073] Third Embodiment. Fig. 7 is a constitutional diagram for explaining an operation of the third embodiment of the mobile phone terminal. In Fig. 7, 1 is a communication operation mode setting unit, 2 is a communication unit, 3 is a clock unit, 8 is a communication unit which communicates with a mobile terminal, 14 is a telephone answering system setting unit as a storage mode setting unit, 15 is a storage unit, 16 is a notification unit, 17 is a display unit, and 18 is a terminal control unit.

[0074] Figure 8 is an operational flowchart for explaining the third embodiment. Firstly, a schematic flow will be described referring to Fig. 8. To begin with, it is made with a request of receiving a response message which is used in the telephone answering system function. Then, a communication operation mode, a position information, a time frame information, the response message to be used etc. are set as a setting requirement for operating one of the response messages. Then, date, time, week are set as a time information. Then, the communication operation mode is set for example, as a public mode or as a home mode. As for the public mode, as described above, the mobile phone terminal makes position registration to the base station, and obtains a base station number information. This is a prerequisite of using the third embodiment.

[0075] Description will now be made how to operate the requested response message in practice. Firstly, the operation mode is identified, for example, identified as the public mode. Then, by identifying the standby base station information, varification is made where does it situated in the position information of the response message setting. Then the varification is made by current time information where does it situated in the time frame information in a response message setting. By verifying these aspects, it is determined that which one of the response messages is to be used, and then the determined response message is operated.

[0076] Specific description will now be made by referring to Fig. 7. In Figure 7, response messages are voice recorded in the storage unit 15 in advance. For example, assuming that a response message A has a message A, and a response message B has a message B, and a response message C has a message C, which summed up to three kinds of response messages recorded. Here, assume that the message A is used while the user is working, the message B is used when the user is in a library, and the message C is used when the user is asleep at home.

[0077] Specifically speaking, the message A can be "This is Suzuki of Yamakawa Electrics. Unfortunately I cannot answer your call...", and the message B can be "This is Suzuki. I cannot answer your call because I am in a library. Please transfer email to me if it's urgent", and the message C can be "This is Suzuki. I am sleeping now. Please do not disturb. Please call again tomorrow".

[0078] Then, to the telephone answering system setting unit 14, a setting is made in advance so that it fits to the users' life pattern when operated. This telephone answering system can be set with regard to the position information and the time information. For example, the setting is made such as shown in the telephone answering system setting condition of Fig. 9, i.e. 'office' is set as a position A in the telephone answering system A. Then, the time is registered from 8 o'clock to 19 o'clock, which is the users' working hours. As described above, the 'office' is identified as the position. Also, the clock unit 3 makes it possible to identify 8 to 19 o'clock as 'time A', since it has the time information. Therefore, the telephone answering system of this mobile phone terminal automatically selects the designated message A, which satisfies the setting condition of both the position A and the time A, and then notifies by the notification unit 1.

[0079] The response message B is then set to 'library'. Furthermore, 9 to 19 o'clock is set as time B. This setting makes the communication operation mode public, and it makes possible to set the message B when the user is at the library in the time frame of time B.

[0080] The response message C is then set to 'home' as for the communication operation mode. Thus, when the mobile phone terminal is used as a handset for the digital cordless telephone, the response message C is automatically selected during set time zone of the time C.

[0081] Also, when the position and time do not fit to the set condition, a pre-set response message is set.

[0082] A scheduler setting unit which sets a scheduler function can be used instead of the telephone answering system setting unit that is used as a storage mode

setting unit that can set the position information and the time information. The scheduler function is a function, which memorizes date/time and business memo and gives notification at the specified time. Furthermore, the scheduler function can also be used together with the telephone answering system.

[0083] An caller name notification information setting unit, which sets the caller name notification function can be used instead of the telephone answering setting unit as the storage mode setting unit. The caller name notification function is a function that notifies a caller name by using a caller sub-address. If the function is used for business purpose, the sub-address is made as a company name, and if it is used for private purpose, the sub-address can be a person's name.

[0084] Furthermore, data communication mode setting unit can be used, which sets the data communication mode selection function, instead of using the telephone answering system setting unit as the storage mode setting unit. The data communication mode selection function is a function that selects one of the following modes: a use mode of the terminal to be used in voice calling, or a mode used in data communication. If the data communication is performed outside, generally users will stop in one place and they do not move around. This is to prevent degradation of the wireless condition while communicating. Thus, the users can decide which place is suitable for data communication when they get used to it.

[0085] Yet furthermore, a timetable setting unit, which sets the timetable storage function, can be used instead of using the telephone answering system setting unit as the storage mode setting unit. The timetable storage function is used when storing a Monday-to-Saturday timetable instead of using a notepad.

[0086] According to this embodiment, distinguished response messages can be set based on the position information such as the office or the library. It can also select the response messages in a designated time frame, so that for example, an automatically prepared response message can be used when there is an incoming call at the library where people are required not to talk using the mobile phones. Also, while sleeping at night, separately prepared response message of the telephone answering system that is more convenient can be selected and set and used for response.

[0087] Then, if the scheduler setting unit, which sets the scheduler setting function, is used instead of using the telephone answering system setting unit that is used as a storage mode setting unit, the scheduler setting can be done depending on the position information and the time information set to the scheduler function. The scheduler setting, for example, is to display a business related schedule during the working hours, or to display or to notify a private related schedule if the user is not in

the normal working hour. Other than the aforementioned examples, the scheduler setting can automatically send emails when used with the telephone directory function and the notepad together. It can also specify the response message when worked together with the telephone answering system function. Furthermore, it can also transfer the incoming call when worked with a telephone transfer function.

[0088] Also, if the caller name notification information setting unit, which sets the caller name notification function, is used instead of using the telephone answering system setting unit that is used as a storage mode setting unit, a functional setting can be done depending on the position information and the time information set to the caller name notification function. The functional setting, for example, is to notify the business related callers name during working hours, or to notify the private related callers name if the user is not in the normal working hour.

[0089] Furthermore, if the data communication operation mode setting unit, which sets the data communication operation mode selection function, is used instead of using the telephone answering system setting unit that is used as a storage mode setting unit, a functional setting can be done depending on the position information and the time information set to the data communication operation selection function. The functional setting, for example, is to set the data communication operation mode during the time frame of daytime at a particular place where the electric wave condition is good, or to set the talk operation mode at other places.

[0090] Yet furthermore, if the timetable setting unit, which sets the timetable display function, is used instead of using the telephone answering system setting unit that is used as a storage mode setting unit, a functional setting can be done depending on the position information and the time information set to the timetable display function. The functional setting, for example, is to display a school timetable in the morning time frame at home, or to display a part-time job timetable or the like in the daytime time frame at school, which timetables correspond to the day of the week.

[0091] Fourth Embodiment. Fig. 10 is a constitutional diagram for explaining an operation of the fourth embodiment of the mobile phone terminal. In Fig. 10, 1 is a communication operation mode setting unit, 2 is a communication unit, 3 is a clock unit, 8 is a communication unit which communicates with a mobile terminal, 19 is a transportation schedule setting unit as a storage mode setting unit, 20 is a storage unit, 21 is a display unit, and 22 is a terminal control unit

[0092] Figure 11 is an operational flowchart for explaining the fourth embodiment. Firstly, a schematic flow will be described referring to Fig. 11. To begin with, a transportation schedule is made. Then, a communication operation mode, a

position information, a time frame information, the transportation schedule to be used etc. are set as a setting requirement for displaying one of the transportation schedules with priority. Then, date, time, week are set as a time information. Then, the communication operation mode is set for example, as a public mode or as a home mode. As for the public mode, as described above, the mobile phone terminal registers its position to the base station, and obtains a base station number information. This is a prerequisite of using the fourth embodiment.

[0093] Description will now be made how to display the requested transportation schedule in practice. Firstly, the operation mode is identified, for example, identified as the public mode. Then, by identifying the standby base station information, varification is made where does it situated in the position information of the transportation schedule setting. Then the varification is made by current time information where does it situated in the time frame information in the transportation schedule setting. By verifying these aspects, it is determined that which one of the response messages is to be used, and then the determined response message is displayed with priority.

[0094] Specific description will now be made by referring to Fig. 10. In Figure 10, the transportation schedule is stored in the storage unit 20 in advance. For example, assumming that a transportation schedule A stores a bus schedule, a transportation schedule B stores a train schedule B, and a transportation schedule C stores a plane schedule C, which summed up to three kinds of transportation schedules stored in the storage unit 20. Here, assume that the transportation schedule A is a bus schedule, which is used when the user moves from home to a train station for commutation, the transportation schedule B is a train schedule, which is used when the user moves from a bus stop to the office/school, and the transportation schedule C is a plane schedule, which is sometimes used by the user for business trips.

[0095] Then, the transportation schedule setting unit 19 is set to be displayed with priority so that it fits the users' life pattern. This transportation schedule can be set with regard to the position information and the time information. For example, the transportation schedule setting condition is set as shown in Fig. 12, i.e. 'home' is set as the communication operation mode and 'domicile' is set as the position A. Then, the time is registered from 6 o'clock to 9 o'clock, which is a time frame for commutation. Therefore, the transportation schedule of this mobile phone terminal automatically selects the designated transportation schedule A, since its communication operation mode is 'home' and it satisfies the setting condition of both the position A as the domicile and the time A. The transportation schedule content intended to be used is then

displayed by the display unit 21.

[0096] The transportation schedule B is then set to 'public' as the communication operation mode, and 'bus line' as the position B. Although the public base station of the personal handyphone system covers relatively small area, general calling area covers relatively wide area, so that when identifying wide area such as the bus line, the general calling area information can be used and is possible to set a plurality of general calling areas as needed. Furthermore, 7 to 12 o'clock is set as time B. These settings make it possible to automatically select the intended transportation schedule content to be displayed next from other registered transportation schedules, if the communication operation mode is set public and satisfies the setting conditions of both the position B and the time B, which then can be displayed by the display unit 21. [0097] Then, if the transportation schedule C is set to 'public' as the communication operation mode, 'office' is set as the position C, and normal working hours is set as the setting time frame of the time C, the transportation schedule C can be displayed on the mobile phone terminal at office when the user need to go to a business trip by a plane

[0098] Furthermore, although a certain transportation schedule is displayed with priority according to its setting condition, a predetermined operation can be made to have access to other groups' transportation schedules. Also, if the position and the time does not apply to the set condition, the transportation schedule will be displayed based on the selection order set in advance.

[0099] According to this embodiment, an intended transportation schedule to be displayed next can be set based on the position information such as at a domicile, in a vehicle, or at office, which fits the user's life pattern. Furthermore, since it is possible to selectively display the transportation schedule of the designated time frame, it has an effect of selecting and controlling convenient transportation schedule for example, it can be displayed with priority another transportation schedule that the user may be able to take, by setting predetermined allowance.

[0100] Yet furthermore, if the keylock setting unit, which sets the keylock setting function, is used instead of using the transportation schedule setting unit that is used as a storage mode setting unit, a keylock functional setting can be done depending on the position information and the time information set to the keylock setting function. The keylock functional setting, for example, can be set while the user is at commuting route, or can be set on working /school days only.

[EFFECT OF THE INVENTION]

[0101] According to the first invention, based on the position information and

time information set in each memory mode, it is possible to provide a mobile phone terminal, which can retrieve, extract and control the input information that fits to a user's life pattern.

[0102] According to the second invention, based on the position information and time information set in the telephone directory function, it is possible to provide a mobile phone terminal, which can retrieve/extract and display the business related telephone directory during working hours and private related telephone directory if the user is outside the office or not in the normal working hours.

[0103] According to the third invention, based on the position information and time information set in the redialing function, it is possible to provide a mobile phone terminal, which can retrieve, extract and display the business related redialing information during working hours and the private related redialing information if the user is not in the office or not in the normal working hours.

[0104] According to the fourth invention, based on a position information and time information that sets the call notification mode selection function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to select a vibrator notification while at the meeting room, a library or during nighttime, or to select incoming ringtone notification during daytime.

[0105] According to the fifth invention, based on a position information and time information set in the ringback tone selection function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to select a ringer as incoming ringtone during daytime at office, or to select an original melody incoming ringtone which can be easily recognized of one's own while in the crowded place outside, or to select a fixed melody ringtone while at home during nighttime.

[0106] According to the sixth invention, based on a position information and time information set in the ringing volume selection function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to select to change the ringing volume larger when the user is in crowded surroundings such as stations, or to change the ringing volume lower if the user is in a quiet place or if it is at nighttime.

[0107] According to the seventh invention, based on a position information and time information set in the reception volume selection function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to select to change the reception volume larger when the user is in crowded surroundings such as stations, or to change the reception volume lower if the user is in a

quiet place.

[0108] According to the eighth invention, based on a position information and time information set in the telephone answering system function, it is possible to provide a mobile phone terminal that can set a functional setting of the telephone answering system. The functional setting, for example, is to record and respond with a business type response message with the user's company name at office, or with a response message that asks a caller to send emails at a library, or with a response message which tells the user is asleep at home during nighttime.

[0109] According to the ninth invention, based on a position information and time information set in the scheduler function, it is possible to provide a mobile phone terminal that can set a scheduler setting. The functional setting, for example, is to display a business related schedule during the working hours, or to display or to notify a private related schedule if the user is not at office or if it is not the normal working hour. Other than the aforementioned examples, the scheduler setting can automatically send emails when used with the telephone directory function and the notepad together. It can also specify the response message when worked together with the telephone answering system function. Furthermore, it can also transfer the incoming call when worked with a telephone transfer function.

[0110] According to the tenth invention, based on a position information and time information set in the caller name notification function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to notify or to select a business related caller name during working hours, or to notify or to select a private related caller name if the user is not at office or if it is not the normal working hour.

[0111] According to the eleventh invention, based on a position information and time information set in the data communication operation mode selection function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to select is to select the data communication operation mode during the time frame of daytime at a particular place where the electric wave condition is good, or to select the talk operation mode at other places.

[0112] According to the twelfth invention, based on a position information and time information set in the timetable display function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to display a school timetable in the morning time frame at home, or to display a part-time job timetable after school in the daytime time frame at school, which timetables correspond to the day of the week.

[0113] According to the thirteenth invention, based on a position information and time information set in the transportation schedule display function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to display transportation schedule of buses, trains, and planes separately, and to display the transportation schedule with priority, which timetable allows the user to have enough time catching the transportation.

[0114] According to the fourteenth invention, based on a position information and time information set in the keylock setting function, it is possible to provide a mobile phone terminal that can set a functional setting. The functional setting, for example, is to set the keylock function while the user is at commuting route, or to set the keylock function on working /school days only.

[BRIEF DESCRIPTION OF THE DRAWINGS]

[FIG. 1] Figure 1 shows a constitutional diagram of the mobile phone terminal for explaining the first embodiment of the present invention.

[FIG. 2] Figure 2 shows an operational flowchart of the mobile phone terminal for explaining the first embodiment of the present invention.

[FIG. 3] Figure 3 shows a telephone directory setting condition according to the first embodiment of the present invention.

[FIG. 4] Figure 4 shows a constitutional diagram of the mobile phone terminal for explaining the second embodiment of the present invention.

[FIG. 5] Figure 5 shows an operational flowchart of the mobile phone terminal for explaining the second embodiment of the present invention.

[FIG. 6] Figure 6 shows a ringback tone setting condition according to the second embodiment of the present invention.

[FIG. 7] Figure 7 shows a constitutional diagram of the mobile phone terminal for explaining the third embodiment of the present invention.

[FIG. 8] Figure 8 shows an operational flowchart of the mobile phone terminal for explaining the third embodiment of the present invention.

[FIG. 9] Figure 9 shows a telephone answering system setting condition according to the third embodiment of the present invention.

[FIG. 10] Figure 10 shows a constitutional diagram of the mobile phone terminal for explaining the fourth embodiment of the present invention.

[FIG. 11] Figure 11 shows an operational flowchart of the mobile phone terminal for explaining the fourth embodiment of the present invention.

[FIG. 12] Figure 12 shows a transportation schedule setting condition

according to the fourth embodiment of the present invention.

[Explanation of the numerals]

1. Communication operation mode setting unit
2. Communication unit
3. Clock unit
4. Telephone directory setting unit
5. Storage unit
6. Display unit
7. Terminal control unit
8. Communication unit
9. Ringback tone selection setting unit
10. Storage unit
11. Notification unit
12. Display unit.
13. Terminal control unit
14. Telephone answering system setting unit
15. Storage unit
16. Notification unit
17. Display unit
18. Terminal control unit
19. Transportation schedule setting unit
20. Storage unit
21. Display unit
22. Terminal control unit

【0112】第12の発明によれば、時刻表示機能に設定した位置情報と時刻情報に従って、自宅での朝の時間帯には学校の時刻割、学校での昼の時間帯には放課後のアルバイトの時刻割などを曜日対応の時刻割として表示を行う機能設定をすることができる携帯端末を提供することができる。

【0113】第13の発明によれば、時刻表示機能に設定した位置情報と時刻情報に従って、バス、電車、航空機等別の時刻表を選択し、時間的に余裕をもって設定した時刻表の表示を優先表示することができる携帯端末を提供することができる。

【0114】第14の発明によれば、キーロック機能に設定した位置情報と時刻情報に従って、通道路や通学路でのキーロック機能設定や出勤曜日、通学曜日のみのキーロック機能設定をすることができる携帯端末を提供することができる。

【図面の簡単な説明】

【図1】 この発明の実施の形態1の説明をするための携帯端末の構成図である。

【図2】 この発明の実施の形態1の説明をするための携帯端末の動作フロー図である。

【図3】 この発明の実施の形態1における電話帳設定条件を示す図である。

【図4】 この発明の実施の形態2の説明をするための携帯端末の構成図である。

【図5】 この発明の実施の形態2の説明をするための携帯端末の動作フロー図である。

【図6】 この発明の実施の形態2における呼出音設定条件を示す図である。

【図7】 この発明の実施の形態3の説明をするための携帯端末の構成図である。

【図8】 この発明の実施の形態3の説明をするための携帯端末の動作フロー図である。

【図9】 この発明の実施の形態3における留守番電話設定条件を示す図である。

【図10】 この発明の実施の形態4の説明をするための携帯端末の構成図である。

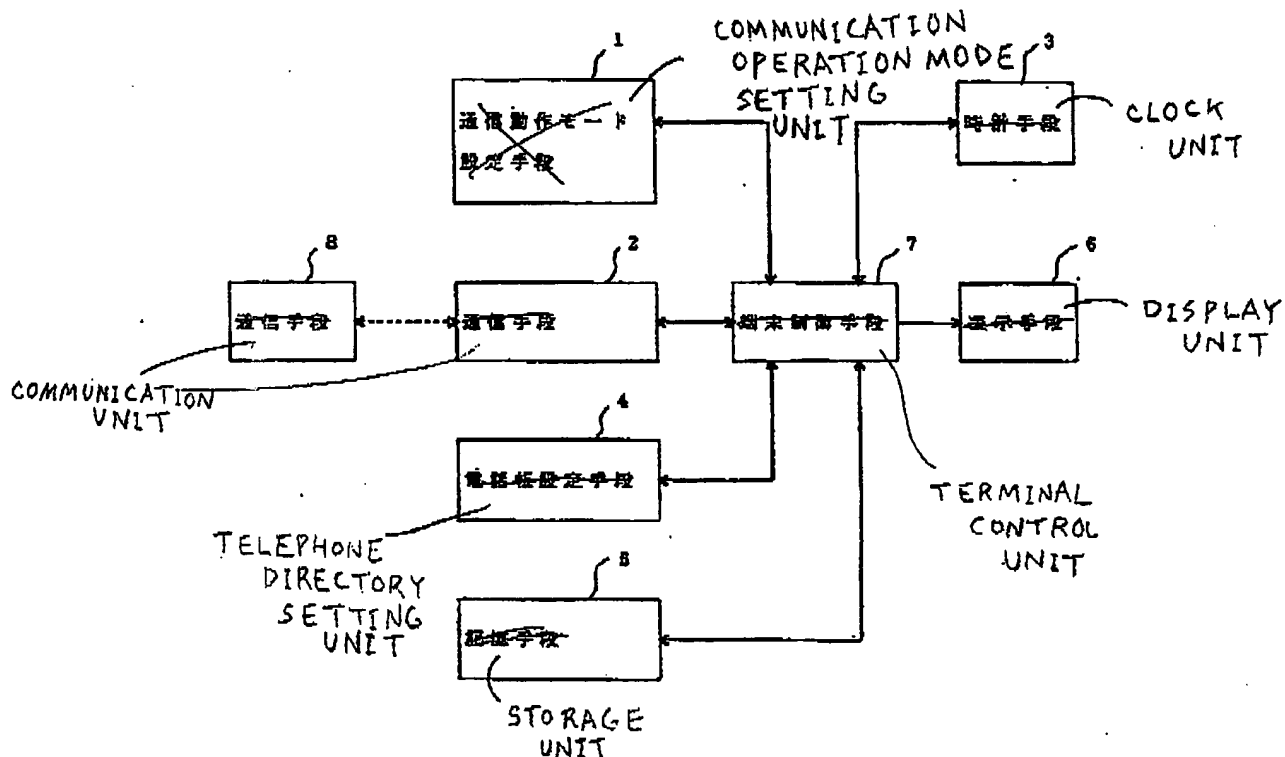
【図11】 この発明の実施の形態4の説明をするための携帯端末の動作フロー図である。

【図12】 この発明の実施の形態4における時刻表設定条件を示す図である。

【符号の説明】

1 通信動作モード設定手段、2 通信手段、3 時計手段、4 電話帳設定手段、5 記憶手段、6 表示手段、7 端末制御手段、8 通信手段、9 呼出音選択設定手段、10 記憶手段、11 報知手段、12 表示手段、13 端末制御手段、14 留守番電話設定手段、15 記憶手段、16 通知手段、17 表示手段、18 端末制御手段、19 時刻表設定手段、20 記憶手段、21 表示手段、22 端末制御手段。

FIG. 1

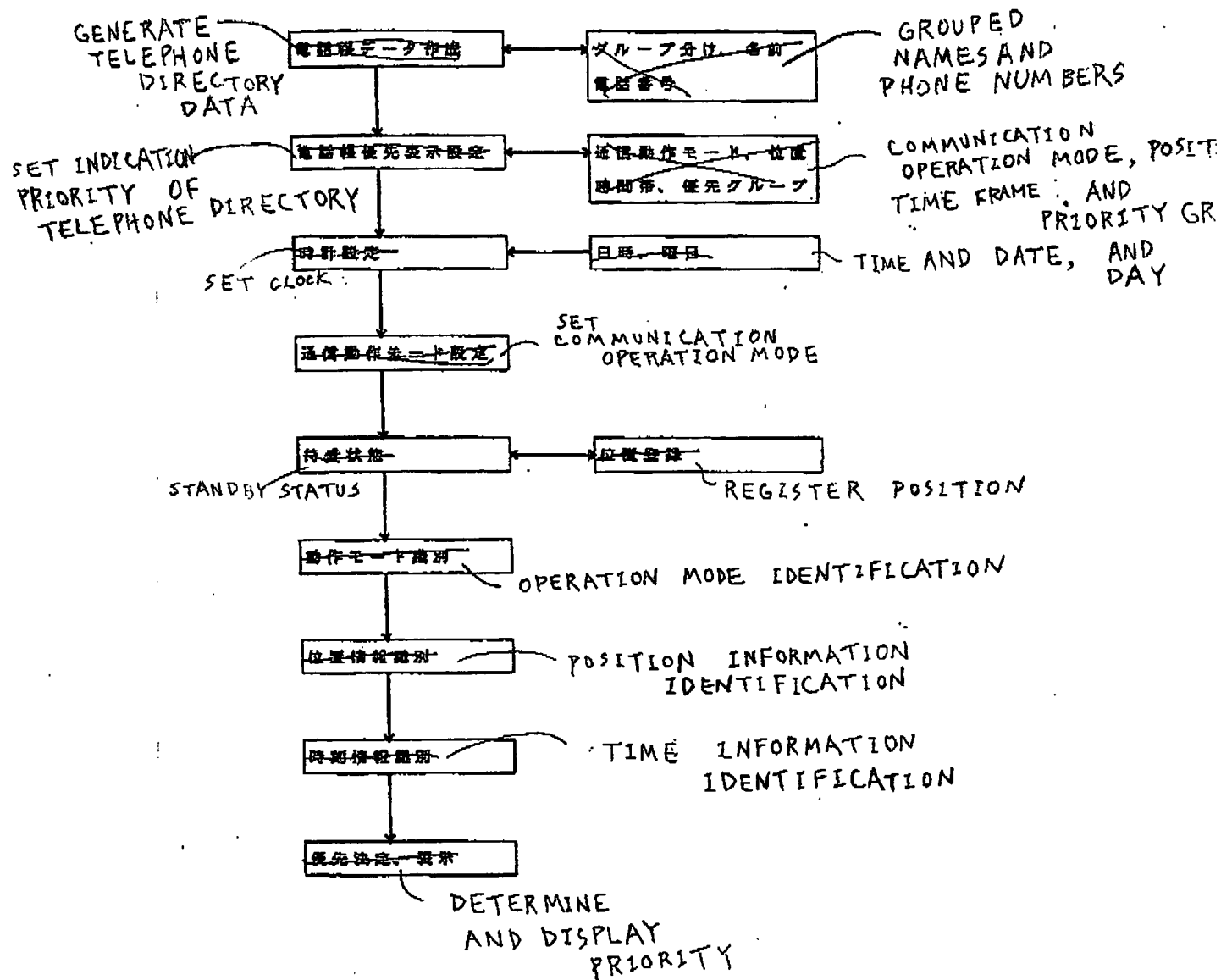


(12)

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FIG. 2

[図2]



(13)

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TELEPHONE
DIRECTORY
GROUP

【図3】 FIG.3

電話帳グループ	A	B	C
主な用途 MAIN USAGE	ビジネス BUSINESS	プライベート PRIVATE	家庭 HOME
通話動作モード COMMUNICATION OPERATION MODE	公衆 PUBLIC	公衆 PUBLIC	家庭 HOME
位置設定情報 POSITION SETTING INFORMATION	POSITION A 位置A 会社 OFFICE	POSITION B 位置B 会社以外	POSITION C 位置C 自宅 HOME
時刻設定情報 TIME SETTING INFORMATION	(時刻A) TIME A 8:00~ 19:00	(時刻B) TIME B 0:00~ 24:00	(時刻C) TIME C 0:00~ 24:00

POSITIONS
OTHER THAN
OFFICE

【図6】 FIG.6

RING TONE GROUP 呼び音グループ	A	B	C
使用する呼び音 RING TONE TO BE USED	サンカ RING TONE	オリジナル メロディ	固定メロディ
通話動作モード COMMUNICATION OPERATION MODE	公衆 PUBLIC	公衆 PUBLIC	家庭 HOME
位置情報 POSITION INFORMATION	POSITION A 位置A 会社 OFFICE	POSITION B 位置B 会社以外	POSITION C 位置C 自宅 HOME
時刻情報 TIME INFORMATION	(時刻A) TIME A 8:00~ 19:00	(時刻B) TIME B 0:00~ 24:00	(時刻C) TIME C 0:00~ 24:00

ORIGINAL
MELODY

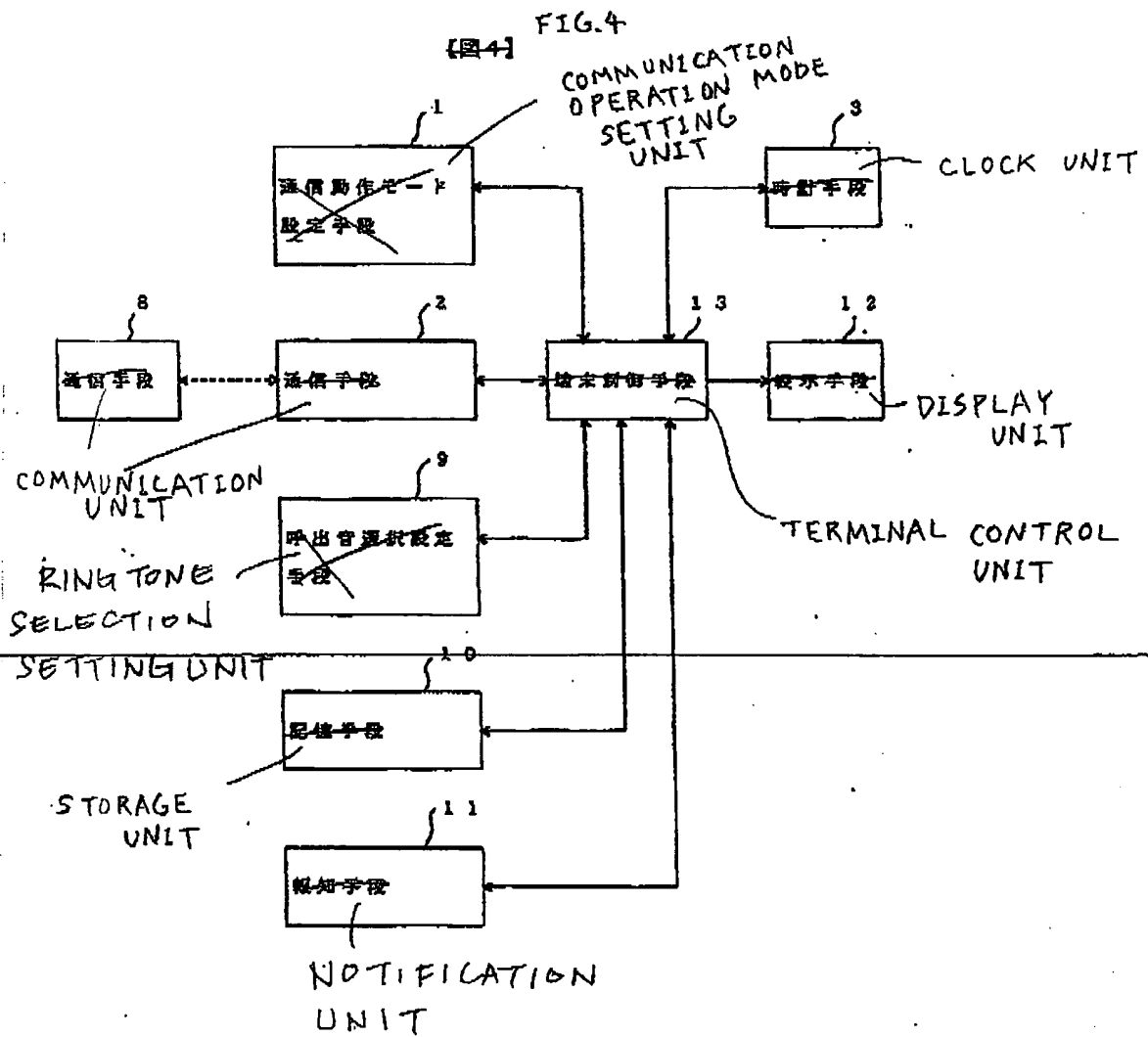
FIXED MELODY

POSITIONS
OTHER THAN
OFFICE

DOMICILE

(14)

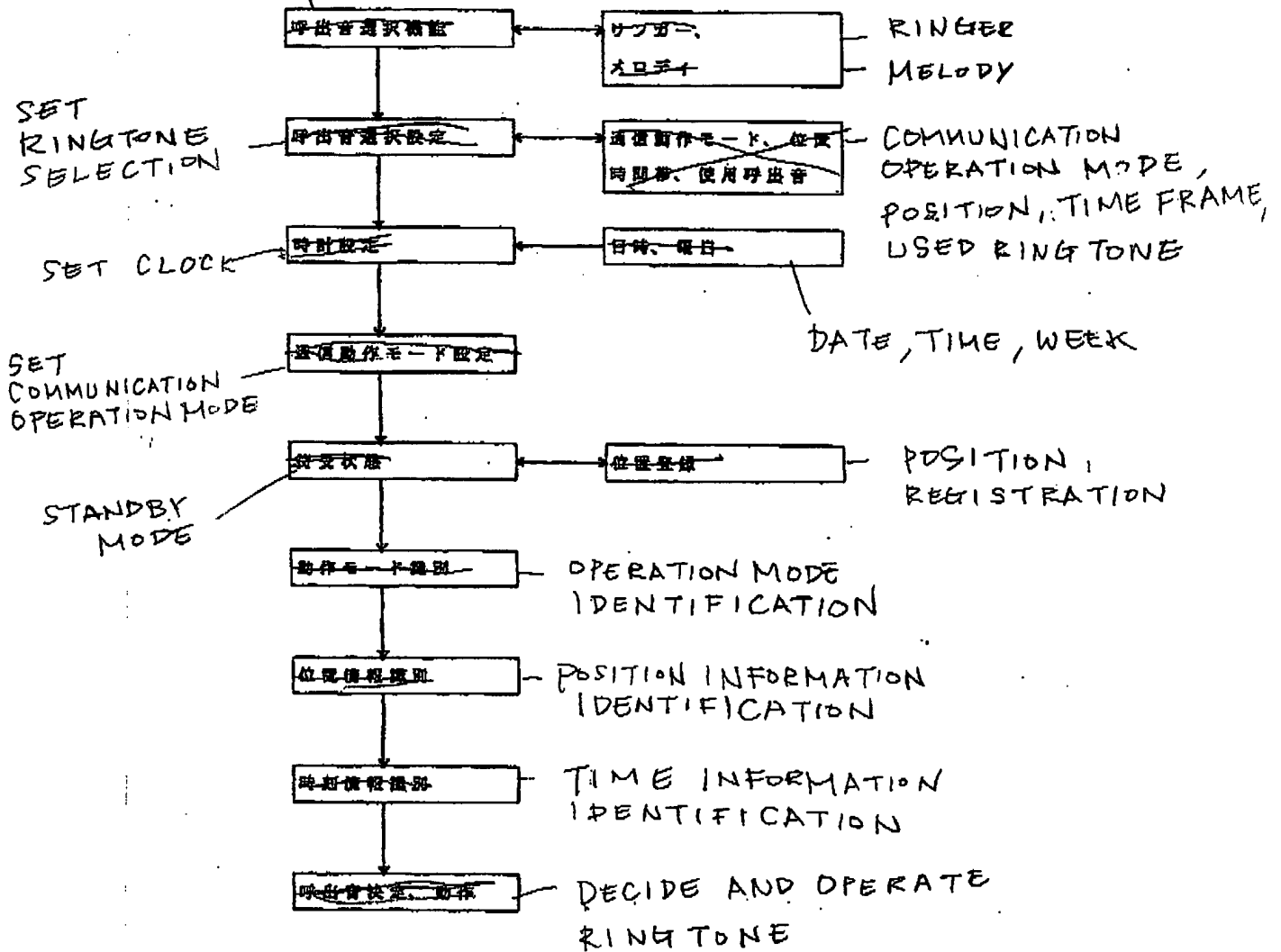
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(15)

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RINGTONE SELECTION FUNCTION [85] FIG. 5

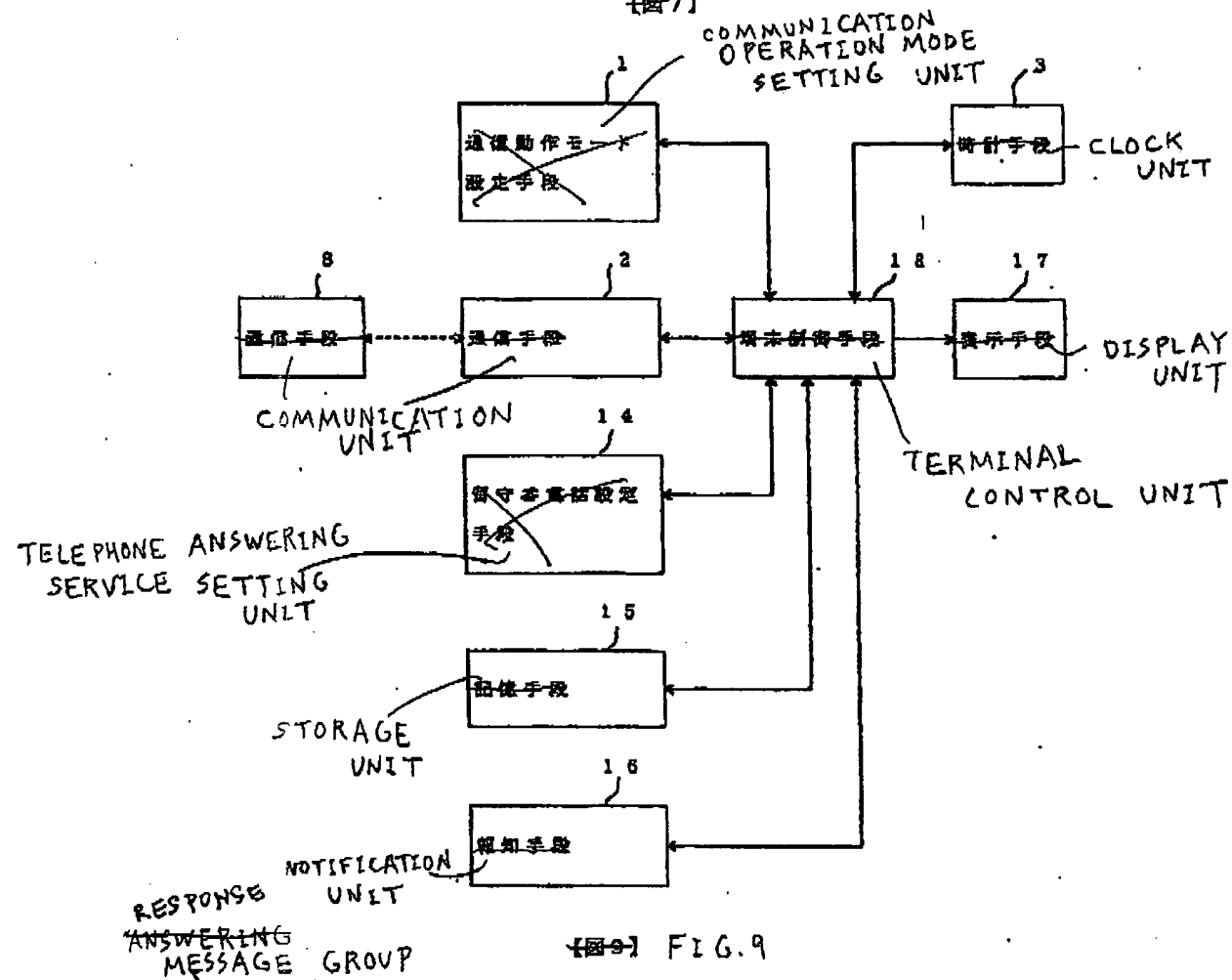


(16)

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FIG. 7

{図7}



{図9} FIG. 9

応答メッセージグループ	A	B	C
主用途 MAIN USAGE	ビジネス BUSINESS	プライベート PRIVATE	家庭 HOME
通信動作モード COMMUNICATION OPERATION MODE	公衆 PUBLIC	公衆 PUBLIC	家庭 HOME
位置情報 POSITION INFORMATION	POSITION A 位置A 会社 OFFICE	POSITION B 位置B 図書館 LIBRARY	POSITION C 位置C 自宅 HOME
時刻情報 CLOCK TIME INFORMATION	CLOCK A 時刻A TIME 8:00~ 19:00	CLOCK B 時刻B TIME 9:00~ 19:00	CLOCK C 時刻C TIME 24:00~ 6:00

DOMICILE

(17)

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【図8】 FIG. 8

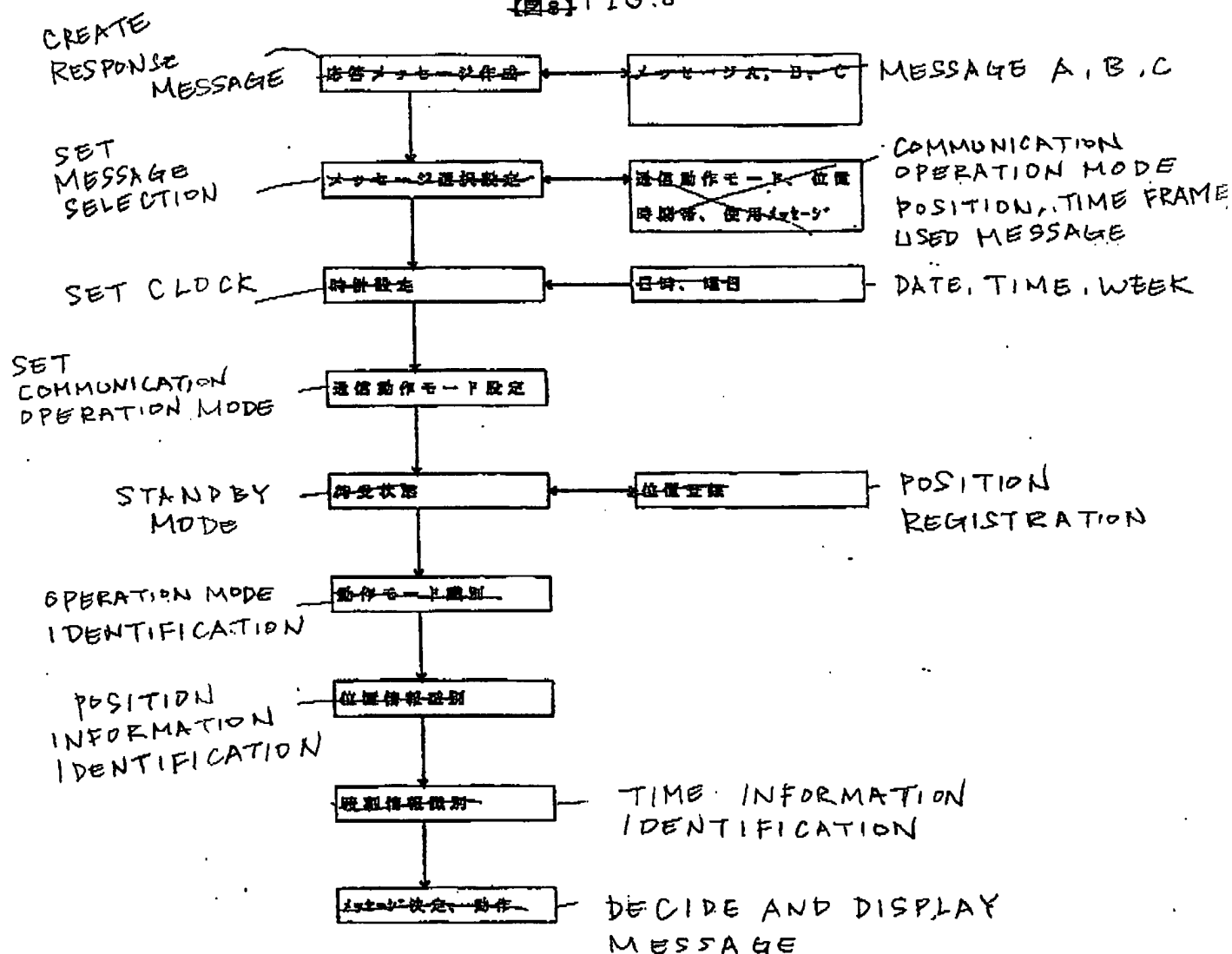
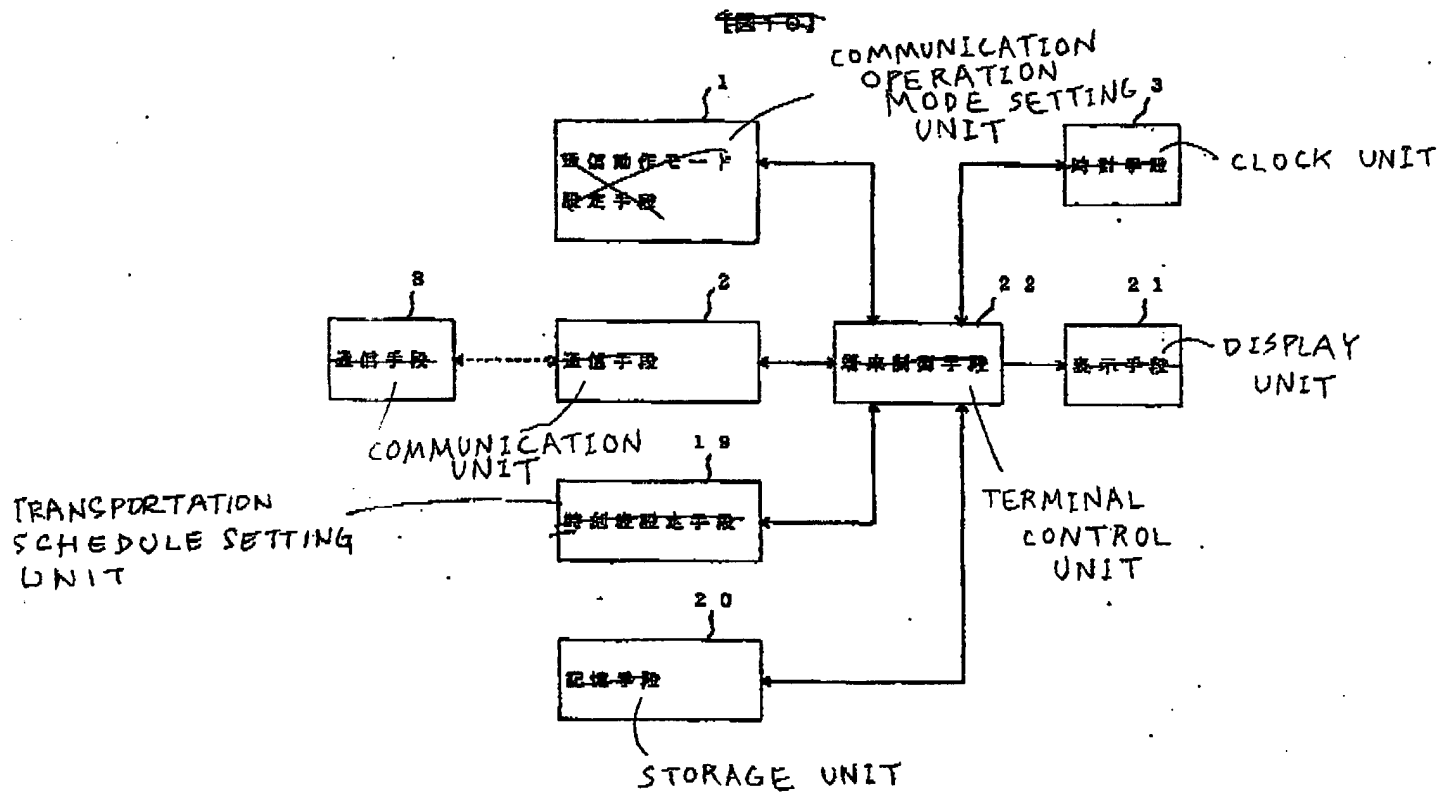


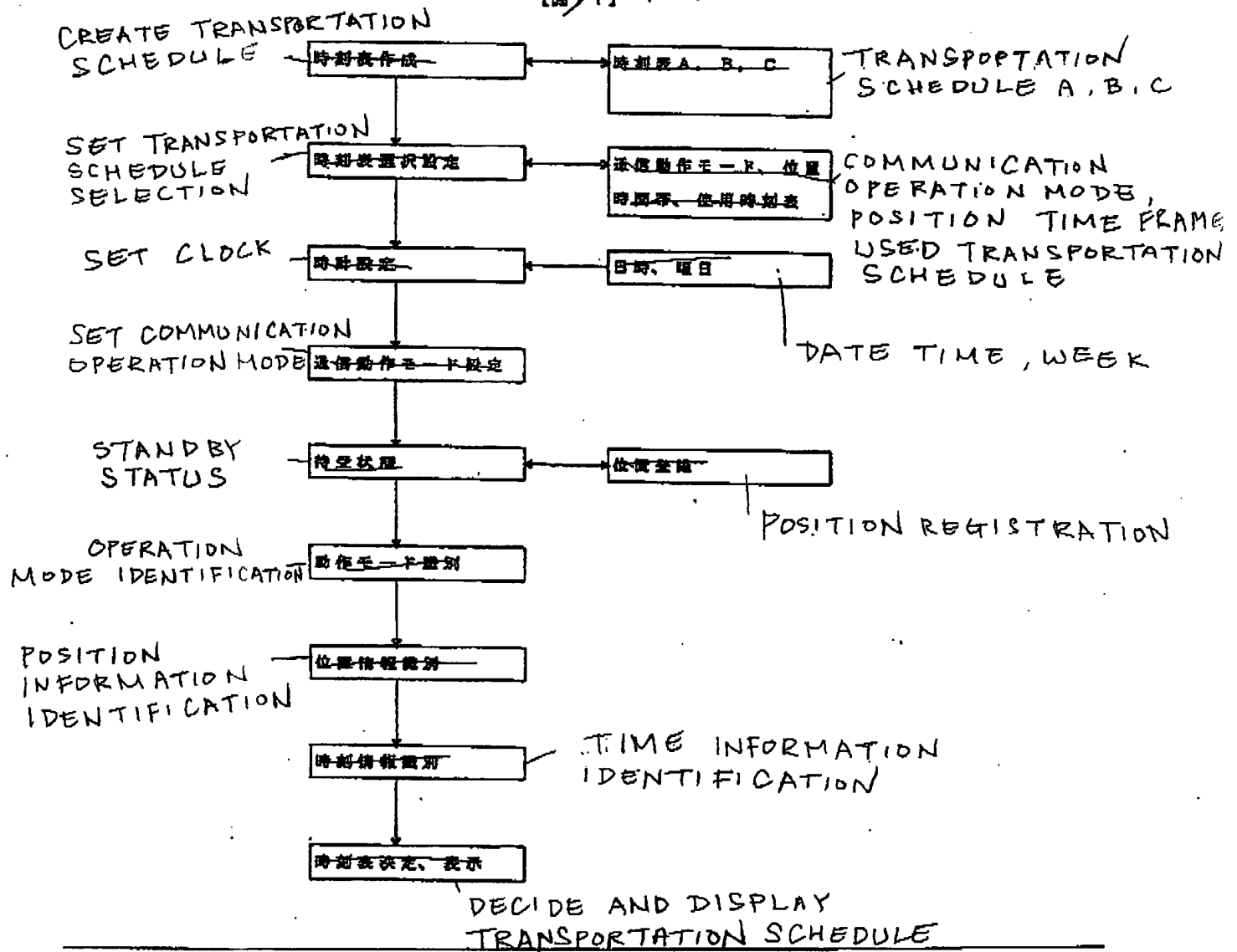
FIG. 10



TRANSPORTATION ~~FIG. 12~~ FIG. 12

SCHEDULE				
時刻表	A	B	C	
TRANSPORTATION MEANS 交通手段	バス BUS	電車 TRAIN	航空機 PLANE	
COMMUNICATION OPERATION MODE 通信動作モード	家庭 HOME	公共 PUBLIC	公共 PUBLIC	
POSITION INFORMATION 位置情報 DOMICILE	POSITION A 位置A 自宅 HOME	POSITION B 位置B バス路線	POSITION C 位置C 会社 COMPANY	
時刻情報 TIME INFORMATION	TIME A 時刻A 6:00~ 9:00	TIME B 時刻B 7:00~ 12:00	TIME C 時刻C 8:00~ 20:00	

[図1] FIG. 11



フロントページの続き

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